

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017349**Date Inspected:** 07-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Steve McConnell**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

1) At weld joints E6/E7 – A1, outside the OBG section: ABF welding personnel Fred Kaddu (#21882) was performing repairs welding on the two transverse indications previously reported. QC Inspector Steve McConnell was present and monitoring the work.

2) At weld joints E7/E8 – F, outside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was performing Shielded Metal Arc Welding (SMAW) with copper backing material. QC Inspector Tony Sherwood was present and monitoring the work.

3) At weld joints E7/E8 – B, outside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) was performing SMAW with copper backing material. QC Inspector Tony Sherwood was present and monitoring the work.

4) At weld joints E6/E7 – C-1 and 2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) were performing Flux Cored Arc Welding (FCAW). QC Inspector Tony Sherwood was present and monitoring the work.

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5) The status of Weld Joint “D” was verified by direct observation and the review of QC Ultrasonic Testing reports; see below for details.

At weld joints E6/E7 – A1, outside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#21882) was performing the final weld passes on the transverse indication at 575 mm for “B” weld. This QA Inspector observed QC Inspector Steve McConnell was present and monitoring the work. This QA Inspector performed a verification of the welding parameters and observed the following: 144 amperes using a 3.2 mm diameter E7018H4R electrode. The welding observed appeared to comply with ABF-WPS-D15-1001 Repair. This QA Inspector observed the indication at 510 mm for weld “B” had been welded the previous day and was in the as welded condition. By the end of the shift this QA Inspector observed welding had been completed and the weld ground flush at both repair areas.

At weld joints E7/E8 – B, outside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) performing SMAW using a copper bar for backing material. QC Inspector Tony Sherwood was present and monitoring the work. This QA Inspector performed a verification of the welding parameters observing the following: 130 amperes using a 3.2 mm diameter E7018H4R electrode. The parameters were within the range specified on ABF-WPS-D15-1040B.

At weld joints E7/E8 – F, outside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) was performing SMAW using a copper bar for backing material. QC Inspector Tony Sherwood was present and monitoring the work. This QA Inspector performed a verification of the welding parameters observing the following: 120 amperes using a 3.2 mm diameter E7018H4R electrode. The parameters were within the range specified on ABF-WPS-D15-1040B.

Later in the shift this QA Inspector was informed and observed both ABF welding personnel Hua Qiang Hwang (#2930) and Xiao Jian Wan (#9677) had been relocated to W7/W8. The welding at both weld joints E7/E8 – B and F was not completed but were approximately 80% and 90% complete.

At weld joints E6/E7 – C-1 and 2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolan (#5042) performing FCAW using a track system. This QA Inspector observed QC Inspector Tony Sherwood verify the following welding parameters: 250 amperes at 24 volts with a travel speed of 192 mm per minute for a heat input value of 1.87 KJ per mm. The welding observed appeared to comply with ABF-WPS-D15-3040A-3.

This QA Inspector observed the status of Weld Joint “D” by direct observation and the review of QC Ultrasonic Testing reports. The status as of this date is as follows:

1) East OBG sections.

- a. E7/E8 – D1 and D2: inside welding appears complete, is partially ground and backing is still in place.
- b. E6/E7 – D1 and D2: inside welding appears complete, not ground and backing is still in place.
- c. E5/E6 – D1 and D2: one repair outstanding, request for R-4 has been submitted and approved.

2) West OBG sections.

- a. W7/W8 – D1 and D2: in process of being fit up

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- b. W6/W7 – D1 and D2: inside welding appears complete, not ground and backing is still in place.
- c. W5/W6 – D1 and D2: welding completed but with 10 UT repairs (R-1)
- d. W4/W5 – D1 and D2: one repair outstanding, R-2

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
